



CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005



Job No: CTCE/BBMP/KRIDL/W.No.13/BM/Agg.G/2018-19

06.04.2018

TEST REPORT ON GRADATION OF AGGREGATES

* Customer	: Asst. Executive Engineer, Shettyhalli Sub Division, BBMP Bangalore.
* Agency	: Technical Manager (West), KRIDL, Bangalore.
* Name of work	: Improvements of Asphaltting at BHEL Mini Colony surrounding area in Mallasandra Ward No.13, Shettyhalli, Sub Division, BBMP, Bangalore.
* Reference	: BBMP/EE/DD/WO/222/2017-18 Dated:07.02.2018
* Sample ID	: Hot Mix Plant, Bangalore
Technical Reference	: IS : 2386(Part -1)-1963 (RA-2011)
* Type of Mix	: Bituminous Macadam
Date of Testing	: 06.04.2018

Total Weight of Sample: 5120 gm

Sieve Size, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade II MORTH Table 500-4 specification
19	365	7.13	7.13	92.87	90-100	
13.2	1680	32.81	39.94	60.06	56-88	
4.75	1485	29.00	68.95	31.05	16-36	
2.36	1125	21.97	90.92	9.08	4-19	
0.3	250	4.88	95.80	4.20	2-10	
0.075	95	1.86	97.66	2.34	0-8	

Total Weight of Sample: 5250 gm

Sieve Size, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade II MORTH Table 500-4 specification
19	415	7.90	7.90	92.10	90-100	
13.2	1585	30.19	38.10	61.90	56-88	
4.75	1670	31.81	69.90	30.10	16-36	
2.36	945	18.00	87.90	12.10	4-19	
0.3	380	7.24	95.14	4.86	2-10	
0.075	100	1.90	97.05	2.95	0-8	

* Information is furnished by the Customer/Representative

Note:

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

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Job No.: CTCE/BBMP/KRIDL/W.No.13/CSR-03/585g/QB(BC)/2018-19

05.04.2018

TEST REPORT ON DETERMINATION OF BITUMEN CHARACTERISTICS

* Customer	:	Asst. Executive Engineer, Shettyhalli Sub Division, BBMP Bangalore.
* Agency	:	Technical Manager (West), KRIDL, Bangalore.
* Name of work	:	Improvements of Asphaltting at BHEL Mini Colony surrounding area in Mallasandra Ward No.13, Shettyhalli, Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/222/2017-18 Dated:07.02.2018
* Sample ID	:	Bitumen
Source/ Location	:	Hot Mix Plant, Bangalore.
Sample Received on	:	03.04.2018
Period of Testing	:	05.04.2018

The results of the tests conducted on the bitumen sample are as follows:

Sl. No	Description	Test Method as per IS	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 °C, 1/10 mm	IS :1203 -1978 (RA-2014)	68	60 to 70
2	Softening point, °C	IS :1205 -1978 (RA-2014)	47	Min. 45
3	Ductility at 27°C, cm	IS :1208 -1978 (RA-2014)	100 >	Min.50
4	Flash Point, °C	IS :1209 -1978 (RA-2014)	315	Min. 220

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VIDYARANI P.K.
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05.04.2018

TEST REPORT ON IMPACT VALUE OF AGGREGATES

* Customer	: Asst. Executive Engineer, Shettyhalli Sub Division, BBMP Bangalore.
* Agency	: Technical Manager (West), KRIDL, Bangalore.
* Name of Work	: Improvements of Asphalting at BHEL Mini Colony surrounding area in Mallasandra Ward No.13, Shettyhalli, Sub Division, BBMP, Bangalore.
* Reference	: BBMP/EE/DD/WO/222/2017-18 Dated:07.02.2018
* Sample ID	: Hot mix plant, Bangalore.
Technical Reference	: IS: 2386 (Part- 4)-1963 (RA-2011)
Date of Testing	: 05.04.2018

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	388	392	
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	80	88	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	308	304	
4	Aggregate Impact value = percent fines $100 * (W_2/W_1)$ percent	20.62	22.45	21.53

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Concrete is 24%

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Job No.: CTCE/BBMP/KRIDL/W.No.13/BC/Shape.T/2018-19

05.04.2018

TEST REPORT ON FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

* Customer	: Asst. Executive Engineer, Shettyhalli Sub Division, BBMP Bangalore.
* Agency	: Technical Manager (West), KRIDL, Bangalore.
* Name of Work	: Improvements of Asphaltting at BHEL Mini Colony surrounding area in Mallasandra Ward No.13, Shettyhalli, Sub Division, BBMP, Bangalore.
* Reference	: BBMP/EE/DD/WO/222/2017-18 Dated:07.02.2018
* Sample ID	: Hot mix plant, Bangalore
Technical Reference	: IS : 2386(Part -1)-1963 (RA-2011)
* Type of Mix	: Bituminous Concrete
Date of Testing	: 05.04.2018

Sl.No.	Description	Result
1	Flakiness Index	11.65%
2	Elongation Index	12.50%
3	Combined Flakiness & Elongation Index	24.15%

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Flakiness & Elongation Index for Bituminous Concrete is 30%

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Job No.: CTCE/BBMP/KRIDL/W.No.13/BC/Stripping/2018-19

07.04.2018

TEST REPORT ON STRIPPING VALUE OF ROAD AGGREGATES (STATIC IMMERSION TEST)

* Customer	: Asst. Executive Engineer, Shettyhalli Sub Division, BBMP Bangalore.
* Agency	: Technical Manager (West), KRIDL, Bangalore.
* Name of Work	: Improvements of Asphaltting at BHEL Mini Colony surrounding area in Mallasandra Ward No.13, Shettyhalli, Sub Division, BBMP, Bangalore.
* Reference	: BBMP/EE/DD/WO/222/2017-18 Dated:07.02.2018
Technical Reference	: IS: 6241
* Type of Mix	: Bituminous Concrete
Date of Testing	: 07.04.2018

Type of binder : 60/70
 Percentage of binder used : 5.00% by wt.
 Total weight of aggregate : 200 g
 Total weight of binder : 10.00 g
 Temperature of water-bath : 40° C

Observation Number	Stripping, Percentage	Average, Percentage	Average Retained Coating, %
1	3.1	3.20	96.80
2	3.2		
3	3.3		

*Information is furnished by the Customer/Representative.

Comments:

→ Minimum allowable Aggregate retained coating for Bituminous Concrete is 95%

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ನಿರ್ದೇಶನ: ಈ ವರದಿಯು ಲ್ಯಾಬರೇಟರಿನಲ್ಲಿ ಪರೀಕ್ಷೆ ಮಾಡಿದ ಮಾದರಿಗಳ ಮೇಲೆ ಆಧಾರಿತವಾಗಿದೆ. ಯಾವುದೇ ಪ್ರಶ್ನೆಗಳಿಗೆ 30 ದಿನಗಳಲ್ಲಿ ಮಾತ್ರ ಉತ್ತರಿಸಲಾಗುವುದು. ಬಾಸವೇಶ್ವರನಗರ, ಬೆಂಗಳೂರು-560 079.

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